Atlantic TECHNOLOGY

Instruction Manual

System 220

High Performance Loudspeaker System

Models
221 LR
223 C
224 SR

System 220

High Performance Loudspeaker System

Welcome to Atlantic Technology's world of excellence in sound reproduction. Your new speaker system is precision crafted to give you years of enjoyable, trouble free service. This manual covers the **Atlantic Technology System 220** series of speakers for home theater. It will show you how to incorporate the following System 220 components into your present system, as well as how to set up a complete system. (Except the Model 222 PBM. It is covered in a separate manual.)

The **Model 221 LR Front Channel Speakers** are two-way systems for use with a quality subwoofer, such as the Atlantic Technology Powered Bass Modules. Each speaker contains a 4" polypropylene, long-throw woofer, and a 1/2" ferrofluid cooled tweeter in an acoustically inert MDF cabinet.

The **Model 223 C Center Channel Speaker with Variable Cinema EQ** contains two high power 3-1/2" polypropylene woofers and a 1/2" ferrofluid cooled tweeter. It is designed for use in home theater systems that use a Dolby Pro Logic decoder.

The **Model 224 SR On-Wall/In-Wall Surround Speaker** is intended for use in audio/video sound systems with a Dolby Pro Logic receiver (or a Dolby Pro Logic decoder and a surround amplifier). Each speaker has two 3-1/2" polypropylene drivers that are angled and phased to produce ambience without localization for movie surround sound tracks.

Although the speakers in the Atlantic Technology System 220 are acoustically and cosmetically matched to each other, they may also be used with a wide variety of other speaker systems.

Note: *The 224 SR is not intended for use as a regular right and left front channel stereo speaker or satellite. Its spatial performance characteristics are not designed for this purpose. In the Atlantic Technology 220 Series of components, the Model 221 LR fills this role.*

Connection

We recommend that you connect your new System 220 speaker components using high quality stranded wire of 18 gauge or larger for lengths up to 25 feet. Use 16 gauge or larger for longer runs of wire. Contact your local audio/video specialist for more specific information.

Warning: *To prevent risk of electrical shock or damage to your equipment, always switch off the amplifier or receiver when making connections to the speaker.*

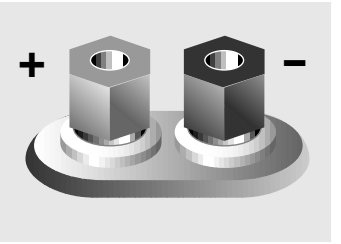


Figure 1: *Speaker Wiring Terminals*

You can connect your System 220 speakers by using spade lugs or "banana" connectors, or by removing 1/2" of insulation from each wire end, twisting the strands of wire together, placing the wire through one of the post holes and screwing down the nut tightly.

It is important to observe polarity while making speaker connections: red (+) terminals on the amplifier to red (+) on the speaker, black (-) on the amplifier to black (-) on the speaker. Look carefully at the wires you are using and note that one of the wires in each pair is marked by either a different color, printing, ridges, or a thread intertwined with the wire strands. Conventionally, the marked wire is connected to the red (+) terminal.

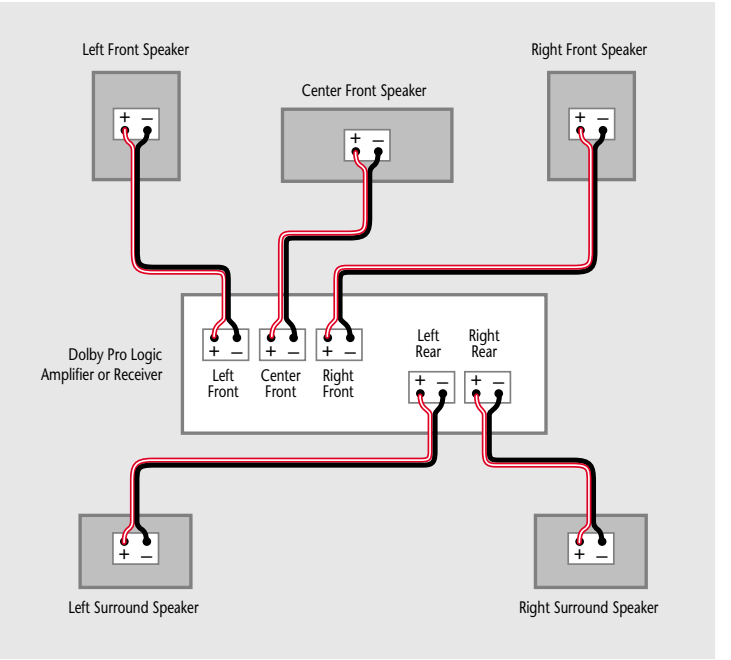


Figure 2: *Typical wiring diagram for speakers in a home theater.*

Whether your are connecting a complete System 220, or adding one speaker component to your present system, the wiring should look like the diagram in Figure 2. Before turning on the amplifier, be certain that no stray wire strands are touching across the two terminals as this might damage your amplifier.

Finally, check the polarity of your front speakers by listening to some music. If the sound seems hollow, spread out and has weak bass, recheck your connections for proper polarity and reverse the connections if necessary.

Placement

The design of the System 220 provides you with maximum flexibility when creating a large, seamless, acoustically accurate soundfield for your home theater or music system. The best placement of the various components will vary from system to system. Use the following placement guidelines and Figure 3 as a starting point. Feel free to experiment.

Home Theater

For a home theater system, place your Model 221 LR speakers on either side of the television. All of the System 220 speakers (except the Model 222 PBM Powered Bass Module) are magnetically shielded so that they will not interfere with your television picture. The left front and right front speakers should be far enough apart that you get a good stereo image, but not so far apart that the sound seems to come directly from the speakers, distracting you from the picture. If you are using a center channel speaker, a wider separation of the left and right front speakers is usually possible.

The Model 223 C should be placed directly on or under your television. Place the speaker base so that the foot cutouts are facing forward. Then, set the speaker on its base and tilt the speaker so that it points directly at the listener.

The 224 SR's size and shape allows greater flexibility in placement than most conventional surround loudspeakers. Due to their spatial characteristics, it is possible to place the speakers virtually anywhere, but usually the best location is nearly straight out to the sides of the primary listening area, either at ear level or 1-2 feet above.

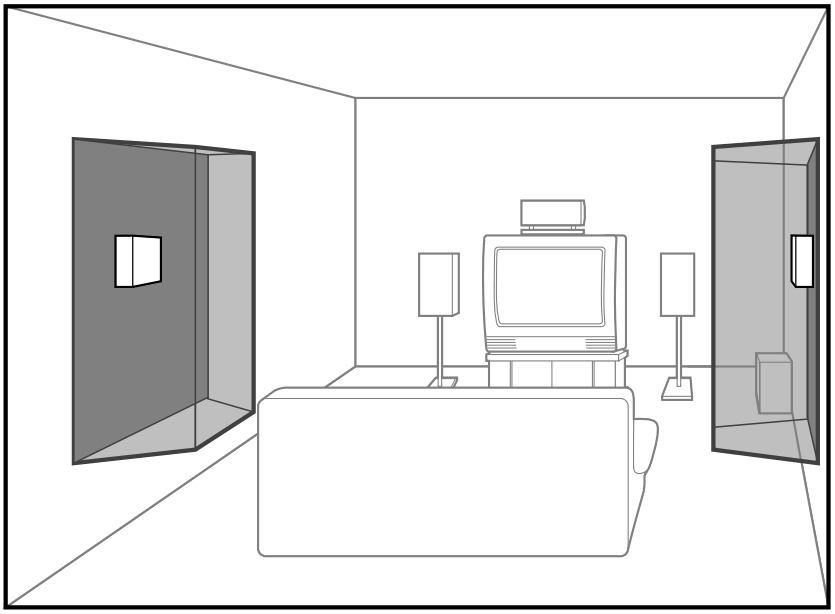


Figure 3: *Typical arrangement for speakers in a home theater. For best results, place the surround speakers within the shaded areas.*

Music Only System (Model 221 LR only)

If you are setting up a music only system, begin with these general guidelines:

- The distance between your speakers should be about one-half their distance from your favorite listening position.
- The front of the speakers should point straight at you.
- The distance from each speaker to its three closest room surfaces should be different.
- In most rooms, you should not place your speakers in the corners.

Next, be creative! Try placing your speakers along the long wall instead of the short one. Toe the speakers in or point them straight ahead. Pull them away from the wall or push them close. Don't be timid. You will find that moving your speakers, even a few inches, can greatly change their sound.

Finally, remember that the best place for your speakers is the one that satisfies **you** both visually and sonically.

Cinema EQ Adjustments (Model 223 C only)

The home theater experience is best enjoyed when sounds remain consistent in tonal balance when panned across the soundstage. For that reason, the Atlantic Technology System 220 was designed with acoustically matching drivers.

To help achieve this goal when using front speakers from another manufacturer, we have provided a control on the rear of the 223 C enabling you to adjust its tonal characteristics to emulate those of your front left and right speakers.

Begin the adjustment procedure by turning the control knob to the 1 o'clock position. This approximates the Atlantic Technology 221 LR speakers. Next, use your Dolby Pro Logic receiver/decoder's "test" mode to generate "hiss" from each speaker and adjust the 223's control for the closest match.

Although a perfect match is not usually possible, fine tuning the EQ control while watching high quality movies will generally yield excellent results. If most of your listening is Dolby Stereo movies, you may wish to adjust the Cinema EQ control to compensate for the natural brightness of many movie soundtracks.

Note: *Some Dolby Pro Logic decoders and receivers offer a choice of "normal" or "wide-band" modes for the center channel. The Model 223 C was designed to be used in the "normal" mode.*

Mounting

The 221 LR and the 224 SR speakers can be mounted in a variety of ways:

On speaker stands. Atlantic Technology 156 ST speaker stands provide an ideal height (29" above the floor) and fit for most rooms. They are available in black or white.

On the wall. For greatest flexibility, use Atlantic Technology 157 WB wall brackets with their pivoting ball-and-socket joint.

To flush mount your speakers, we have provided metal key-hole brackets. Simply place the bracket over the oval recess on the rear of the speaker and fasten it using the enclosed #6 x 1" screws. Pilot holes are provided for both brackets.

For safety, please use suitably secured wall anchors (such as molly-bolts), or screws driven into wall studs.

Note: *The 224 SR speakers hang upside-down, so you will need to remove and invert the grilles.*

On a bookshelf. Adhesive rubber feet are included.

In the wall. The Atlantic Technology 254 INRF in-wall kit includes all the necessary hardware and trim. (224 SR only)

Listening Levels and Power Handling

The power recommendation for these speaker components assumes that you will not operate your amplifier/receiver in a way that produces distortion. Even rugged speakers like System 220 can be damaged by a moderately powered system if it is producing distortion.

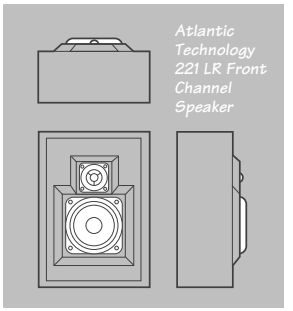
If you hear a harsh or gritty noise coming from your speakers, turn down the volume. Prolonged or repeated operation with a distorted signal from your amplifier/receiver can cause damage to your speakers that is not covered by the warranty.

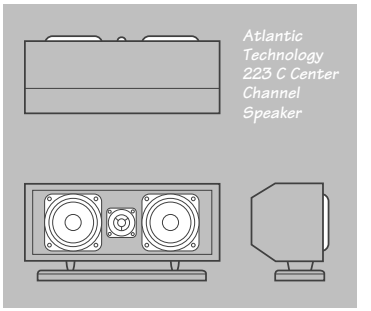
Care of your Speakers

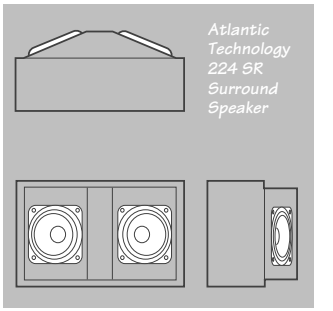
Clean your speaker cabinets using a soft cloth and a mild, non-abrasive household cleaner being careful not to wet the individual drivers or the edges of the cabinet. After carefully removing them from the speakers, clean the grilles with warm water and a mild dish detergent, and dry with a soft, lint-free cloth.

Avoid placing your speakers in direct sunlight that may, over time, fade the finish.

System 220 Specifications







Description	***221 LR***	***223 C***	***224 SR***
Type	Sealed-box, 2-way	Sealed-box, 2-way, Adjustable Cinema EQ	Sealed-box, spatially-enhanced surround speaker
Drivers	(1) 4" polypropylene (1) 0.5" dome tweeter	(2) 3.5" polypropylene (1) 0.5" dome tweeter	(2) 3.5" polypropylene
Frequency Response (±3dB)	80Hz – 20kHz	80Hz – 20kHz	80Hz – 12kHz
Nominal Impedance	8Ω	8Ω	8Ω
Sensitivity	90dB	90dB	90dB
Recommended Amplifier Power	10 – 120W	10 – 120W	10 – 120W
Size (W x H x D)	5.86 x 9.5 x 7.25in 150 x 240 x 185mm	13.0 x 4.25 x 6.5in (5.5in H with base) 330 x 108 x 160mm (140mm H with base)	9.5 x 6.63 x 6.0in 24 x 170 x 150mm
Weight (each)	5.81lbs; 2.63kg	7.15lbs; 3.24kg	5.4lbs; 2.45kg

Specifications are those in effect at the time of printing. Atlantic Technology reserves the right to change specifications or designs at any time without notice.

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For Future Reference

Record your speaker(s) serial number(s) and date of purchase here:

Model Number	Serial Number	Date of Purchase
Model Number	Serial Number	Date of Purchase
Model Number	Serial Number	Date of Purchase

The serial number is found on the back of the speaker near the connecting terminals.

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